

simultaneously acquiring thermal and positional data and means for processing the data into a graphical overlay for a topographical map of the ground fire region. Original claims 3 and 4 are directed to a method of producing such an overlay by acquiring thermal and positional data and processing the data to produce a graphical outline of the fire suitable for overlaying a topographic map of the fire region. New claims 5-8 all depend from original claims and are directed to the air-mobile or overflying aspects of the present invention which is fundamentally different from the apparatus employed by Barker in U.S. Patent No. 1,959,702. The new claims are supported by the specification on page 3, first paragraph.

Claim 1 stands rejected under 35 U.S.C. § 112 for being indefinite. The Examiner contends that the word "adapted" is vague. Accordingly, applicant has changed "adapted to create" to "for creating". Applicant believes that use of either the word "adapted" or "for" in connection with functional language in the preamble of claim 1 is conventional, permissible and does not render the claim indefinite.

The Examiner states that the word "carryable" is vague. Applicant has responded by changing the word "carryable" to "mountable". The word "mountable" means that the apparatus has a structure which is capable of being mounted on... (an air-mobile platform). Applicant is confused by the Examiner's statement that: the word "carryable" is vague since it is an intended use and therefore carries no patentable weight (Office action, page 2, lines 4-5). Whether a functional term in an apparatus claim carries patentable weight is a separate question from whether the claim is vague. Functional language is commonly used and allowed in apparatus claims. Applicant is

unaware of any authority for the proposition that functional language in apparatus claims inherently renders the claim vague or indefinite.

The Examiner states that claim 1 is also indefinite because "said two data-acquisition apparatuses" lacks antecedent basis. Accordingly, applicant has amended line 16 of claim 1 to change "two data-acquisition apparatuses" to "thermal data-acquisition apparatus, said latitude/longitude data acquisition apparatus". Applicant believes this amendment overcomes the Examiner's rejection.

Claim 2 stands rejected under 35 U.S.C. § 112 as being indefinite, for the reasons stated with respect to claim 1, and because of the quotation marks. Applicant has responded to all of the Examiner's concerns with respect to claim 1, and has amended claim 2 to remove the quotations. Claim 2 is now believed to be sufficiently definite to comply with § 112.

Claims 1 and 3 stand rejected under 35 U.S.C. § 112 for being indefinite. In particular, the Examiner objects to the language "and the like". Applicant has removed this language from the claims.

Claim 4 stands rejected under 35 U.S.C. § 112 for being indefinite because it depends from rejected claim 3 and because of the quotation marks. Applicant has responded to the § 112 problems with respect to claim 3 and has removed the quotation marks from claim 4. Therefore, applicant believes claim 4 is sufficiently definite to comply with § 112.

Claims 1-4 stand rejected under 35 U.S.C. § 103 for being unpatentable over Barker in view of the ordinary skill in the art. Applicant traverses this rejection.

Barker's forest fire detecting apparatus is fundamentally different from the present invention. Barker's apparatus includes a plurality of stationary towers each having a light or heat detecting element for acquiring and providing data to a central station 10. In contrast, as recited particularly in new claim 5, the data acquisition and recording components of the present invention are positioned on a single air-mobile platform. The claimed device is designed for areal surveying, whereas the Barker apparatus acquires data from ground supported towers. Thus, the capability of Barker's device is highly dependent on the particular terrain and the distribution of suitable tower locations. Also, Barker's device requires a significant amount of time and labor to erect stationary towers in a given geographical region before the apparatus is capable of detecting forest fires. In contrast, the aircraft mobility feature of the present invention provides the significant advantage of being able to use the same fire-perimeter mapping device over a much larger geographical area and without any prior stationary tower erection. The mobility aspects of the present invention are particularly emphasized in new claims 5-8. Barker provides no teaching or suggestion of a mobile fire detection apparatus and the Examiner has failed to find any other reference which teaches or suggests such a device. The Examiner cannot rely on "the ordinary skill in the art" to bridge the gap between Barker and the claimed invention, especially where the present invention offers substantial advantages which no one has apparently realized since Barker's patent issued in 1934.

Moreover, original independent claims 1 and 3, without amendment, are patentably distinct from Barker. Barker fails to teach or suggest the claimed time-synchronous recording of data acquired from a thermal data-acquisition apparatus and


a latitude/longitude data-acquisition apparatus. In fact, there is no need for a latitude/longitude data-acquisition apparatus in Barker because the towers are stationary. Also, Barker fails to teach or suggest the claimed data analyzing means and the X-Y plotter or any other structure which is capable of producing various perimetral isothermally differential outlines for overlaying a topographical map of the fire region. Applicant believes that such an overlay could not be produced by the Barker apparatus.

Based on the above amendments and remarks, applicant believes that all pending claims are patentable over the prior art of record and are in condition for allowance. Applicant respectfully requests reconsideration of the application and prompt allowance of the claims.

If a telephonic interview would in any way advance prosecution of the case, please contact the undersigned.

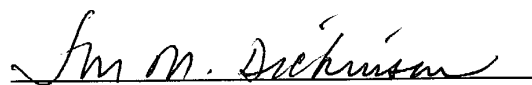
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